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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,076	05/13/2005	Diane Elsie Hall	BP9861-00	1916
4349 7590 05/27/2010				
CAROL WILSON BP AMERICA INC. MAIL CODE 5 EAST 4101 WINFIELD ROAD WARRENVILLE, IL 60555			EXAMINER GOLOBOY, JAMES C	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 05/27/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Carol.Wilson@bp.com  
bpatentus@bp.com  
MaryJo.Kucharski@bp.com

# Office Action Summary

**Application No.**

10/535,076

**Applicant(s)**

HALL, DIANE ELSIE

**Examiner**

JAMES GOLOBOY

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/17/10.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16, 25, 26, 33-39, 53 and 59-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16, 25-26, 33-39, 59-64 is/are rejected.
- 7) ☒ Claim(s) 53 and 65-75 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Applicant's affidavit filed 2/17/10 is sufficient to antedate the Ritchie reference and disqualify is from use as prior art. A new ground of rejection for some claims is set forth below.

***Claim Rejections - 35 USC § 103***

2. Claims 16, 25-26, 33-39, and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fetterman (U.S. Pat. No. 5,320,765) in view of Cooper in light of the evidence provided by Twigg.

In column 54 lines 51-52 Fetterman discloses the use of low ash lubricating oil in heavy duty diesel engines, as recited in claim 16. In column 54 line 56 Fetterman teaches that the sulfur content of the fuel used in the diesel engine is most preferably less than 0.1% by weight, encompassing the range recited in claims 16 and 25-26. From column 37 line 43 through column 39 line 5 Fetterman discloses that the compositions comprise ZDDP ("component C"), and in the table at the top of column 51 Fetterman teaches that composition comprises 0.8 to 3% by weight of the ZDDP, overlapping the range recited in claim 16. In column 38 Fetterman discloses that the R groups on the ZDDP are preferably alkyl groups with 4 to 18 carbon atoms. The the range of sulfur contents arising from the ZDDP will therefore overlap the ranges recited in claims 16, 33-35, and 59-64. As there are no other required sulfur-containing additives, the sulfur content of the compositions of Fetterman is therefore considered to meet the limitations of those claims. In column 48 lines 18-45 Fetterman discloses that

the compositions can comprise friction modifiers, including organic friction modifiers and molybdenum compounds as recited in claim 36. In column 30 lines 62-64 and from column 35 line 52 to column 36 line 29 Fetterman discloses that the composition can comprise phenolic or aromatic amine antioxidants as recited in claim 37. In column 40 lines 19-22 Fetterman discloses that the composition can comprise salicylate detergents, meeting the limitations of claims 36 and 38. In column 5 lines 60-62, column 41 lines 42-44, column 48 lines 53-55 Fetterman discloses that the composition comprises the additives recited in claim 39.

Fetterman does not disclose a heavy duty diesel engine further equipped with the claimed particulate trap.

Cooper, in column 1 lines 4-56, discloses a particulate trap for diesel engines which comprises a filter and a catalyst. In column 2 lines 16-21, Cooper discloses that the trap contains a platinum or other platinum group metal oxidation catalyst. The trap of Cooper therefore meets the limitations of the trap of claim 16. The results shown in Figure 4 and discussed in column 10 lines 19-45 show that the trap is useful in heavy duty diesel engines, such as those of Fetterman.

While Cooper does not refer to the trap as a continuously regenerating trap, Twigg, in column 1 lines 25-36, refers to the trap of Cooper as a continuously regenerating trap. The use of the trap of Cooper in the heavy duty diesel engine of Fetterman therefore meets the limitations of claim 16.

It would have been obvious to one of ordinary skill in the art to use the trap of Cooper in the heavy duty diesel engine in the method of Fetterman, as Cooper teaches

that the trap provides superior performance in removing particulates from heavy duty diesel exhaust streams. As the method of Fetterman in view of Cooper in light of the evidence provided by Twigg performs all the steps of the claimed method, it will meet the limitations regarding the reduction of nucleation mode particles recited in claim 16.

### ***Allowable Subject Matter***

3. Claims 53 and 65-75 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 53 and 65-75 require the composition to comprise 0.4% by weight of less of ZDDP. Fetterman discloses a minimum ZDDP concentration of 0.8% by weight. One of ordinary skill in the art would not have had a reason to reduce the ZDDP content of the composition as Fetterman teaches that it is a required component.

### ***Response to Arguments***

4. The affidavit submitted by applicant is sufficient to overcome the rejections set forth in the previous office action. The new rejection utilizes Fetterman, which is prior art under 35 USC 102(b) and therefore cannot be sworn behind.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES GOLOBOY whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Goloboy/  
Examiner, Art Unit 1797